

# **NAVSEA Enterprise**

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### **Command Information Officer (SEA 00I)**



# *Recent Cyber-Scary Headlines*

## **The Year in Cybersecurity: 5 Threats to Watch in 2015**

By Julianne Pepitone

Tuesday, 30 Dec 2014 | 12:08 PM ET

**NBC News**

## **Emerging Cyber Security Threats**

By Stephanie Gailhard, News 8

Published: September 3, 2015

## **Security**

Date of Publication: 07.21.15. 07.21.15

By Andy Greenberg

## **Hackers Remotely Kill a Jeep on the Highway—With Me in It**

## **The scary state of cybersecurity**

By Kevin G. Coleman

August 14, 2014

**C4ISR & NETWORKS**

## **5 charts that show cyber threats are growing**

MarketWatch, by [Priya Anand](#)

Published: Oct 15, 2015 10:35 a.m. ET

## **House Dem drafts bill to address 'scary truth' about cybersecurity**

THE HILL, by Cory Bennett, 10/01/15

The Washington Post, by Andrea Peterson, June 18, 2015

## **This terrifying chart explains why cybersecurity is such a big problem for the government**

Crunch Network

## **Hacking For Cause: Today's Growing Cyber Security Trend**

Posted Aug 8, 2015 by Dan Lohrman

## **Defense One US Navy Revives Ancient Navigation as Cyber Threats Grow**

October 15, 2015

By Steve Mollman

## *Objective of Today's Events*

- **Open a dialogue with industry on the unique cyber security requirements and challenges faced by the NAVSEA Enterprise**
- **Introduce the cybersecurity community to the NAVSEA Enterprise**
- **Answer industry questions on NAVSEA's cybersecurity vision for the near and mid-term**

# *Topics*

- **NAVSEA Enterprise Overview**
- **Cybersecurity Design Drivers**
- **CIO Responsibilities and Challenges**



# *NAVSEA at a Glance*



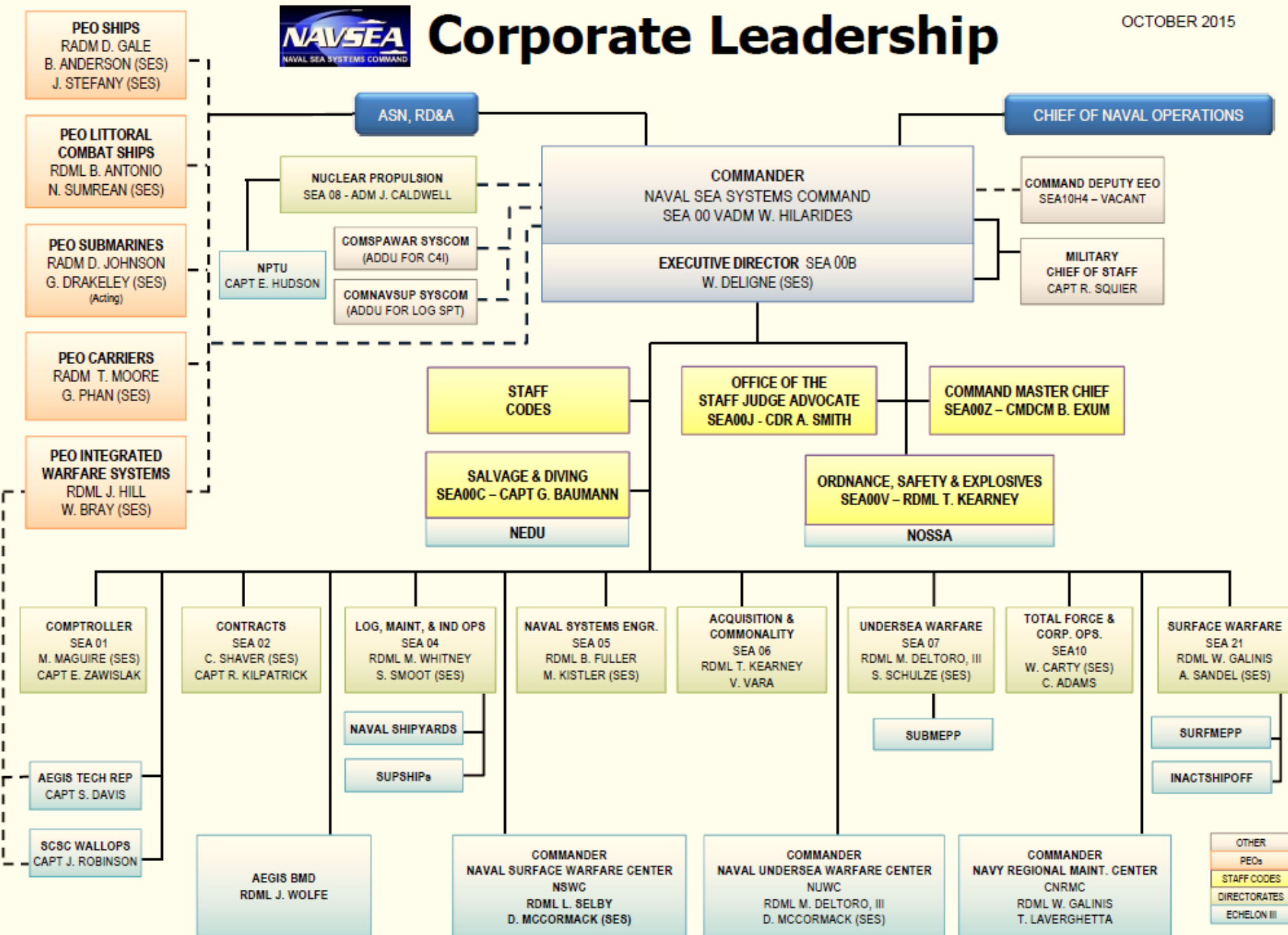
- People 70,000 +
- Locations 30+
- Total acquisition programs 150
- Budget \$30+ billion
- Total information systems 1800+





# Corporate Leadership

OCTOBER 2015





# *We Build Ships and Ship Systems*



# *We Design and Deliver*

- Combat Systems
- Hull, Mechanical, and Electrical Systems
- Interior Communications
- Navigation Systems





# *Types of Systems*

1. Defense Business Systems (DBS)
2. Navy Control Systems (Afloat and Ashore)
3. Research, Development, Test, and Evaluation Systems
4. Maintenance Systems
5. Test and Range Control Systems
6. Training Systems

*It's all about the ships!*

# *System Design through the 1990s: Mission Focused*

- **Government-off-the-shelf (GOTS)**
  - MILSPEC'd OSs, computers, message formats and protocols
  - Point-to-point analog and serial hardwire connections
  - Segregated, secure communications via TYPE I encrypted TADILs
- **Security attributes of....**
  - Confidentiality
  - Availability
  - Integrity

.... were assured by *system* design
- **Migration to commercial-of-the-shelf (COTS) technology introduced unexpected challenges, to include cyber security issues**

***Must Balance Mission and Security***

# *DoD Cybersecurity Guidance*

- **Four Principle Tenets:**

- Detect
- Protect
- React
- Recover

**Requires complementary cybersecurity solutions across networks to create a seamless cybersecurity architecture.**

# *Cybersecurity Key System Attributes*

- **Resiliency: Fights through cyber attacks**
- **High degree of automation**
- **Complementary cybersecurity solutions across independent and integrated security architectures**
- **Network growth without compromising security**
- **Cyber situational awareness**
- **Boundary defense capabilities at network control points**



# *CIO Responsibilities*

## **Enterprise Lead:**

- NAVSEA Cyber Security Strategy
- Enterprise-wide IT/IS and Cybersecurity policy and guidance
- Enterprise Network Operations and Cyber Incident and Response
- Cybersecurity Risk Management Framework for DBS and Shore Infrastructure
- Cyber Audits, Inspections, and Technical Assist visits
- IT/IS and Cyber Competency, Workforce Development, and Training
- Information Management
- NAVSEA IT/IS compliance with the Americans with Disabilities Act (ADA)

## **Headquarters:**

- IT/IS Service Delivery for 3500+ Personnel

# *Unique Challenges*

- **Implementation of Enterprise Cybersecurity Strategy**
- **Protection of Unclassified, Critical Technical Information on cleared defense contractor networks and systems**
- **Cyber workforce development and training**

# *Enterprise Cybersecurity Strategy*

- Today, many commands and field activities have implemented the required protective measures
- Require a common Enterprise solution for....
  - Continuous monitoring
  - Situation awareness
  - Cyber incident and response
  - Command and control across the various commands
- Developing a Test Bed to complete technical evaluations of new technologies

# *Unclassified Critical Technical Information*

- **DFAR 252.204-7012: “Safeguarding Covered Defense Information and Cyber Incident Reporting”**
- **Initial discussion held with shipbuilders**
  - What constitutes “Unclassified Critical Technical Information”?
  - How does a prime flow down the requirements to Sub-contractors?
  - What requirements should CDCs IS’s meet? (NIST SP 800-171)
  - How do we address information that’s been in the public domain for several decades?
  - At what cost?



# *Proposed Cyber Security Training Construct*

Training Series		Target Audience	Shore Billets / Job Series / NEC <sup>1</sup>	Ship Billets / NEC <sup>2</sup>	Delta Knowledge, Skills, Abilities (KSA) from Job Series or NEC	Course Level	Description
100	CYBER AWARE	ALL IS Users	All	All	N/A	101	DAU CLE 074 - Cyber Security Throughout DoD Acquisition
200	CYBER SMART	Decision Makers	Ex: PEO/ED/TD/MPM/DPM	CO/XO/DH	N/A	201	USNA Course Si110
300 E	CYBER ADVANCED	Engineers	Ex: 0801, 0854, 1550	Ex: EMO, STO, C5I Officer, SIWO, FC, ST, ET, IC	Example: Software Engineer		
					Ability to Lock Down OS	301	Secure Coding
					Ability to apply STIG	302	STIG Implementation
					Ability to ID & Remediate Software Vulnerabilities	303	Software Vulnerability Identification and Remediation
300 T	CYBER ADVANCED	IT Professionals	Ex: 2210	Ex: 2210			
400	CYBER EXPERT	Cyber Engineers	Ex: 2210 Infosec IT, 2791 SYSADMIN	Ex: 2201, 2791			

**NAVSEA is in need of cybersecurity courseware and technical services support in a number of areas**

# *We Live in a Complex World!*

**We Have....**

COTS and GOTS,

**COTS ON GOTS,**

GOTS ON COTS,

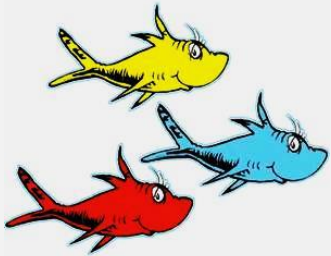
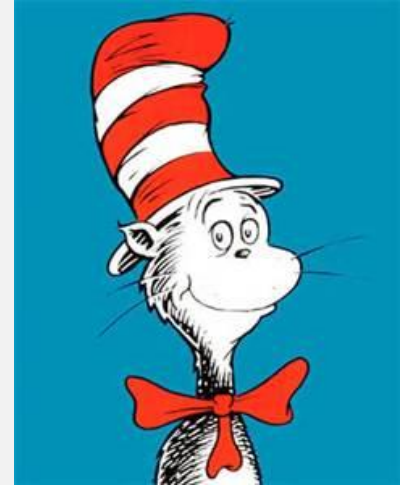
**BOTS on COTS,**

BOIS on GOTS,

**BOTS ON COTS ON GOTS**

AND LOTS AND LOTS AND LOTS OF BOTS!

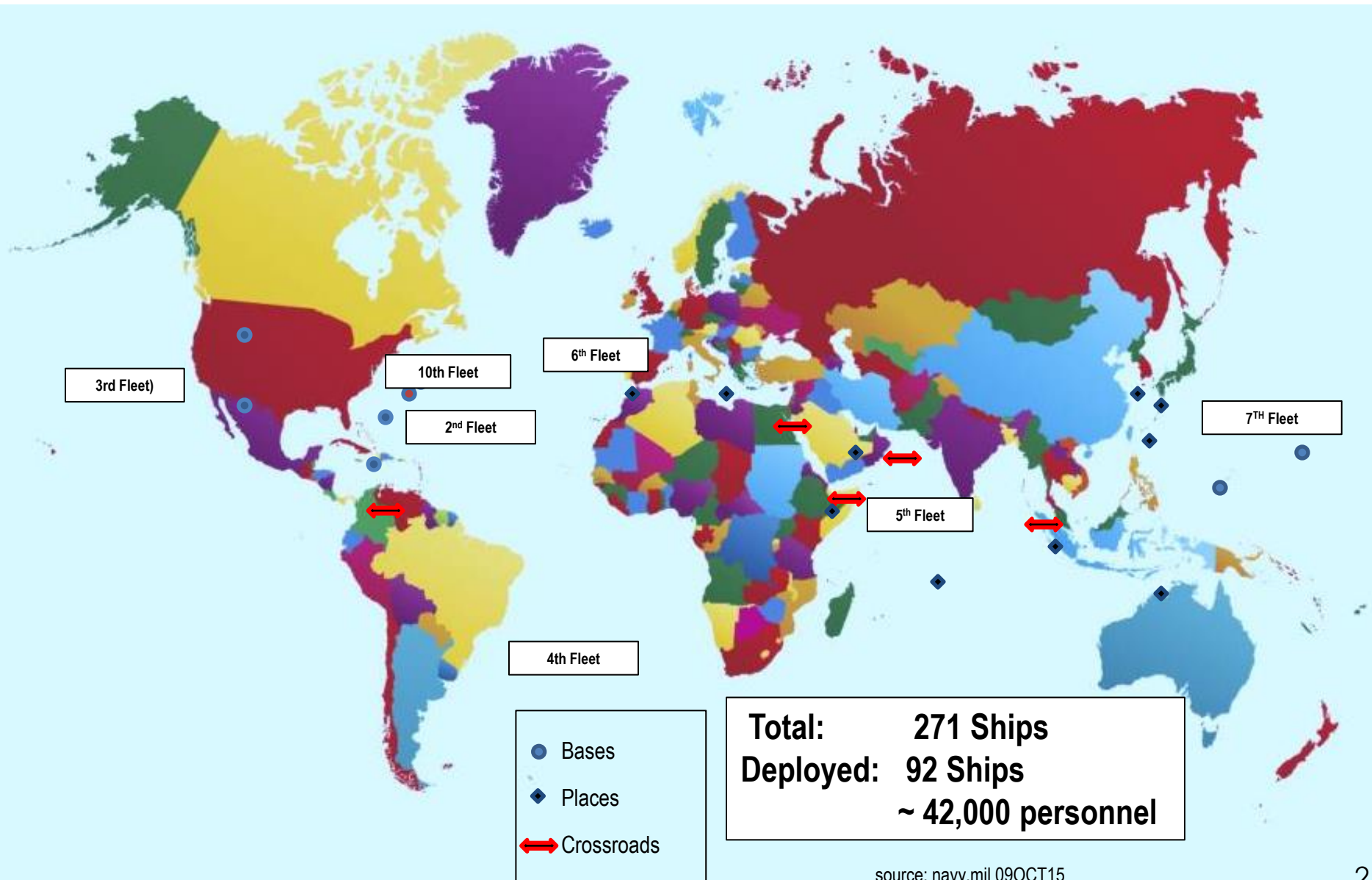
***THIS ISN'T CHILD'S PLAY...***



## **WE NEED YOUR HELP!**

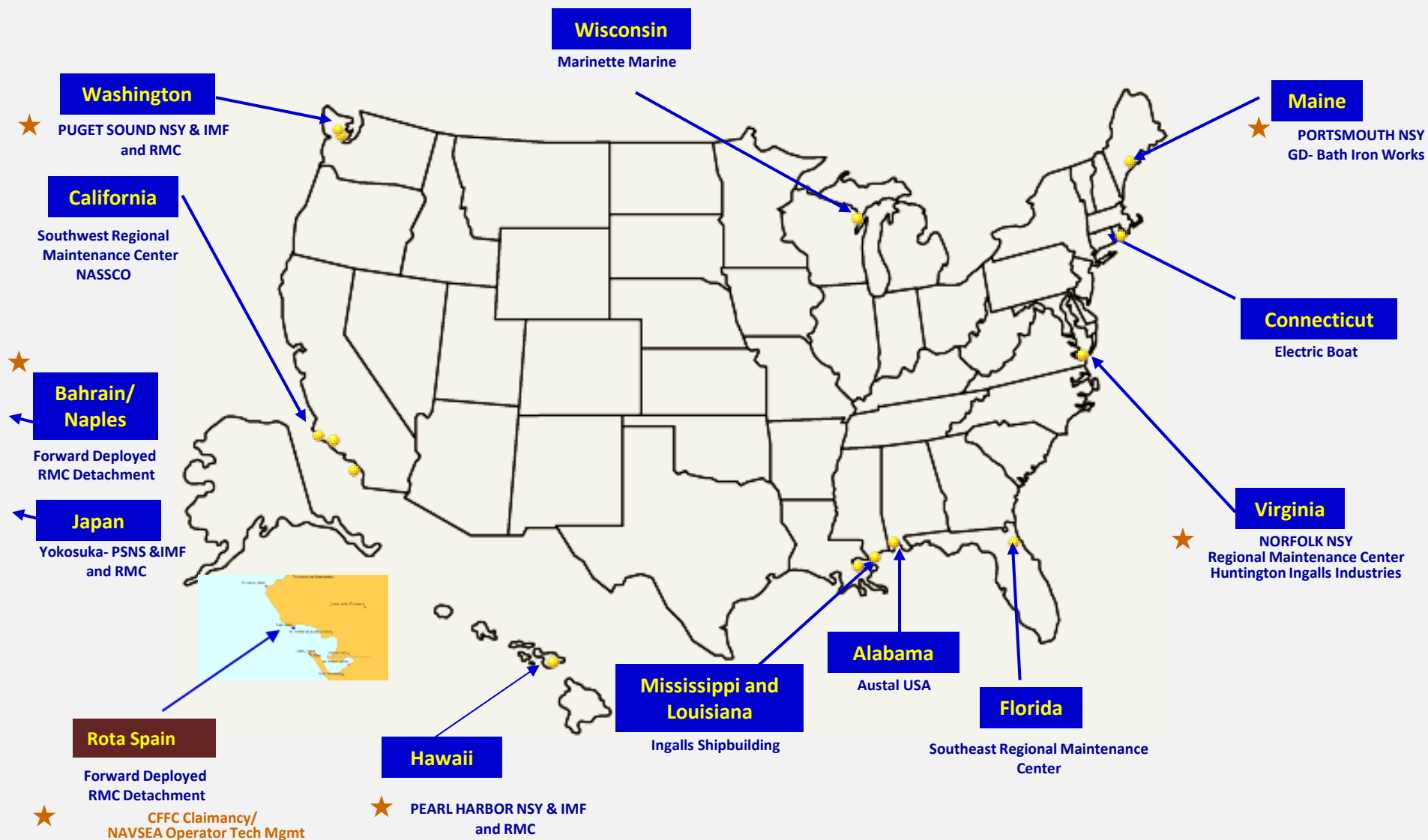
- BACKUP SLIDES

# *Fleet Warfighting Capabilities*

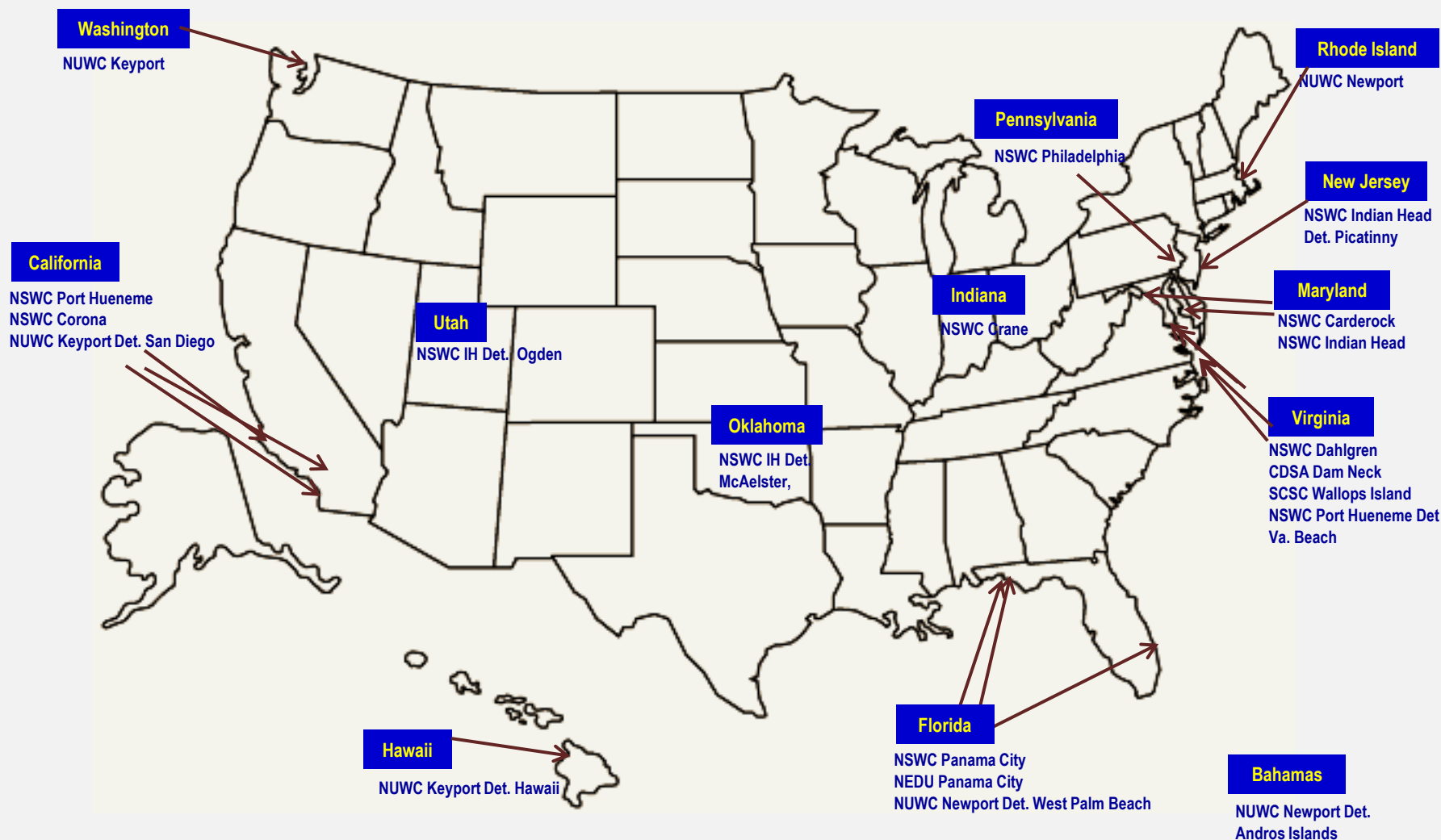




# Maintenance and Shipbuilding Activities



# RDT&E Facilities



# Test and Range Facilities



# Training Facilities

**NAVSEA Builds or Maintains 90+ Trainers  
in 16 Site locations**

Everett/ Bangor

- NSST
- MMTT\*
- VETT\*

Sasebo

- NSST
- VETT\*

Yokosuka

- NSST
- FFT
- MMTT\*
- VETT\*

Rota

- COVE III

Bahrain

- COVE III

San Diego /  
Coronado

- FFT(3)
- DC Wet
- NSST
- BDOC
- MMTT(3)\*
- ASTAC ITA
- LCAC FMT
- MSAT
- ABCTT
- CIAT
- DDG1000
- IWTI
- CIWS BL2
- TDC (O)
- VETT\*
- Virtual Steam
- 19G4A
- 11E15
- COVE
- EABC
- Operator
- TDL (M)

Fallon

- MSAT
- ADSGF

Pearl Harbor

- FFT
- DC Wet
- NSST
- MMTT\*
- VETT\*

Great Lakes

- FFT(1)
- DC Wet
- Virtual Steam
- VETT\*
- 11E15
- 19E51
- 19G4A

Pascagoula

- COVE III

Dahlgren

- NIFC-CA
- PTT
- RCT(2)
- CIAT EDM

Mayport

- FFT (2)
- DC Wet
- MMTT\*
- NSST
- VETT\*

Newport

- FFT(1)
- DC Wet
- MMTT\*
- COVE
- 19G4A

Groton

- VETT\*

Bath

- COVE III

Little Creek /  
Norfolk  
Dam Neck

- FFT(3)
- DC Wet
- NSST
- BDOC
- MMTT (2)\*
- ASTAC ITA
- AATT
- MSAT
- LCAC FMT
- ABCTT
- CIAT
- RHIB
- NSMT
- CIWS BL2
- TDC (O)
- TDL(M)
- VETT\*
- 19G4A
- Virtual Steam
- COVE
- EABC
- Operator

\*VETT and MMTT support multiple courses of instruction